

CLAIM AMENDMENTS

1. (Cancelled)

1 2. (Currently Amended) The apparatus of ~~claim 1~~ claim 22 wherein the output of the
2 amplifier to the load is through a blocking capacitor, the digital-to-analog converter to
3 control the ramp of the voltage at the output to at least one of charging the blocking
4 capacitor to a steady-state reference value at the predetermined rate and of discharging
5 the blocking capacitor from the steady-state reference value at the predetermined rate.

1 3. (Original) The apparatus of claim 2 wherein the amplifier to generate an audio
2 output to the load in which the at least one of powering up and powering down at the
3 predetermined rate reduces audio pop and click at the load.

1 4. (Currently Amended) The apparatus of ~~claim 1~~ claim 22 further comprises a
2 control circuit to generate data sent to the digital-to-analog converter during at least one
3 of powering up and powering down the amplifier.

1 5. (Original) The apparatus of claim 4 wherein the data from the control circuit
2 ramps the voltage at a substantially linear ramp rate

1 6. (Currently Amended) An apparatus comprising:
2 an audio amplifier to generate an output to an audio load;
3 a digital-to-analog converter to drive the audio amplifier during at least one of
4 powering up and powering down the audio amplifier, the digital-to-analog converter to
5 control the audio amplifier to ramp the voltage at the output at a predetermined rate to
6 reduce audio pop and click from being heard at the load during the at least one of
7 powering up or powering down of the audio amplifier; ~~and~~
8 a control circuit to generate data sent to the digital-to-analog converter during at
9 least one of powering up and powering down the audio amplifier; and
10 a clamping switch at the output of the amplifier to selectively clamp the output of
11 the amplifier to a power return potential at a designated output level of the digital-to-
12 analog converter.

1 7. (Currently Amended) The apparatus of claim 6 ~~further comprises a clamping~~
2 ~~switch at an output node of the audio amplifier to clamp the node to a power return~~
3 ~~potential~~, wherein the clamping switch clamps the output ~~node~~ to the return potential at
4 initiation of a powering up sequence and releases the clamp when the audio amplifier and
5 the digital-to-analog converter are substantially fully powered.

1 8. (Original) The apparatus of claim 7 wherein the data from the control circuit
2 ramps the voltage at a ramp rate below frequency heard at the load.

1 9. (Currently Amended) The apparatus of claim 6 ~~further comprises a clamping~~
2 ~~switch at an output node of the audio amplifier to clamp the node to a power return~~
3 ~~potential~~, wherein the clamping switch clamps the output node to the return potential at
4 initiation of a powering down sequence and releases the clamp when the audio amplifier
5 and the digital-to-analog converter are substantially turned off.

1 10. (Original) The apparatus of claim 9 wherein the data from the control circuit
2 ramps the voltage at a ramp rate below frequency heard at the load.

- 1 11. (Currently Amended) A method to power up or power down an audio amplifier
2 ~~comprising~~ comprises:
3 sending digital data for digital-to-analog conversion during a powering up or
4 powering down of an audio amplifier, which generates an output to an audio load;
5 converting the digital data to drive the audio amplifier; ~~and~~
6 clamping of an output node of the audio amplifier to a power return potential at a
7 designated output level of the converted digital data; and
8 using the converted digital data to control the ramping of the voltage at the output
9 to not exceed a predetermined rate to reduce audio pop and click from being heard at the
10 load during the powering up or powering down of the audio amplifier.
- 1 12. (Original) The method of claim 11 further comprises ramping the voltage at the
2 output to a steady-state reference value at the predetermined rate during the powering up
3 of the audio amplifier.
- 1 13. (Currently Amended) The method of claim 12 further comprises ~~the clamping of~~
2 ~~an output node of the audio amplifier to a power return potential during powering up and~~
3 ~~releasing the clamp when the amplifier is substantially fully powered.~~
- 1 14. (Original) The method of claim 12 wherein using the converted digital data
2 controls the ramping of the voltage to a ramp rate below frequency heard at the load.
- 1 15. (Original) The method of claim 11 further comprises ramping the voltage at the
2 output from a steady-state reference value at the predetermined rate during the powering
3 down of the audio amplifier.
- 1 16. (Currently Amended) The method of claim 15 further comprises ~~the clamping of~~
2 ~~an output node of the audio amplifier to a power return potential wherein the designated~~
3 ~~output level is provided during powering down and~~ releasing the clamp when the
4 amplifier is substantially turned off.
- 1 17. (Original) The method of claim 15 wherein using the converted digital data
2 controls the ramping of the voltage to a ramp rate below frequency heard at the load.

1 18. (Currently Amended) An integrated circuit comprising:
2 an audio amplifier to generate an analog output to an audio load, when the audio
3 load is operably coupled to the integrated circuit;
4 a digital-to-analog converter to drive the audio amplifier during at least one of
5 powering up and powering down the audio amplifier, the digital-to-analog converter to
6 control the audio amplifier to ramp the voltage at the output at a predetermined rate to
7 reduce audio pop and click from being heard at the load during the at least one of
8 powering up or powering down of the audio amplifier; ~~and~~
9 a control circuit to generate data sent to the digital-to-analog converter during at
10 least one of powering up and powering down the audio amplifier; and
11 a clamping switch at the output of the amplifier to selectively clamp the output of
12 the amplifier to a power return potential at a designated output level of the digital-to-
13 analog converter.

1 19. (Original) The integrated circuit of claim 18 wherein the control circuit is a digital
2 signal processor.

1 20. (Currently Amended) The integrated circuit of claim 18 ~~further comprises a~~
2 ~~clamping switch at an output node of the audio amplifier to clamp the node to a power~~
3 ~~return potential~~, wherein the clamping switch clamps the output node to the return
4 potential at initiation of a powering up sequence and releases the clamp when the audio
5 amplifier and the digital-to-analog converter are substantially fully powered.

1 21. (Currently Amended) The integrated circuit of claim 18 ~~further comprises a~~
2 ~~clamping switch at an output node of the audio amplifier to clamp the node to a power~~
3 ~~return potential~~, wherein the clamping switch clamps the output node to the return
4 potential at initiation of a powering down sequence and releases the clamp when the
5 audio amplifier and the digital-to-analog converter are substantially turned off.

- 1 22. (New) An apparatus comprising:
2 an amplifier to generate an output to a load;
3 a digital-to-analog converter to drive the amplifier during at least one of powering
4 up and of powering down the amplifier, the digital-to-analog converter to control the
5 amplifier to ramp the voltage at the output at a predetermined rate to reduce rapid voltage
6 changes from being sent to the load during the at least one of powering up or powering
7 down of the amplifier; and
8 a clamping switch at the output of the amplifier to selectively clamp the output of
9 the amplifier to a power return potential at a designated output level of the digital-to-
10 analog converter